

### **REMARKS/DISCUSSION OF ISSUES**

By this Amendment, Applicants cancel claims 1-5 and 7-14 without disclaimer of the underlying subject matter or prejudice against subsequent prosecution, for example by a continuation application. Applicants also amend claims 6, 15 and 16 and add new claims 17-33. Accordingly, claims 6 and 15-33 are pending in the application.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

### **35 U.S.C. §§ 101 and 112**

By this Amendment, Applicants cancel claim 14. Accordingly, the rejections of claim 14 under 35 U.S.C. § 101 and 35 U.S.C. § 112 are deemed to be moot.

### **DOUBLE PATENTING**

The Office Action rejects pending 6 and 15-16 as supposedly being unpatentable over the claims of co-pending Application Serial No. 11/917,310.

Patent Application Serial No. 11/917,310 pertains to a method and system for assisting flight control of a low-flying aircraft.

Applicants respectfully traverse the double patenting rejection and respectfully submit that the pending claims are all clearly patentable over the claims of Application Serial No. 11/917,310.

Accordingly, Applicants respectfully request that the rejections of claims 6 and 15-16 under the ground of non-statutory obviousness-type double patenting over Application Serial No. 11/917,310 be withdrawn.

### **35 U.S.C. §§ 102 and 103**

By this Amendment, Applicants cancel claims 1-5 and 7-14. Accordingly, the rejections of claims 1-5 and 7-14 under 35 U.S.C. §§ 102 and 103 are deemed to be moot.

Claim 6

The Office Action rejects claim 6: under 35 U.S.C. § 102 over Hainfeld; under 35 U.S.C. § 102 over Oraevsky; under 35 U.S.C. § 102 over Bekeredjian; under 35 U.S.C. § 103 over Hainfeld in view of West; and under 35 U.S.C. § 103 over Bekeredjian.

Applicants respectfully traverse those rejections for at least the following reasons.

Applicants respectfully submit that none of the cited references discloses or suggest a contrast agent comprising solid metal nano-particles of rhenium.

Accordingly, for at least this reasons, Applicants respectfully submit that claim 6 is patentable over the cited art.

Claim 15

The Office Action rejects claim 15: under 35 U.S.C. § 102 over Hainfeld; under 35 U.S.C. § 102 over Oraevsky; under 35 U.S.C. § 103 over Hainfeld in view of West; and under 35 U.S.C. § 103 over Bekeredjian.

Among other things, the method of claim 15 includes administering a contrast agent comprising solid metal nano-particles having an acoustic impedance above 35.105 g/cm<sup>2</sup>s to an animal or human patient; applying an ultrasonic sound wave to the animal or human subject; and receiving ultrasound sound wave reflections produced by the ultrasonic wave in the animal or human subject, including ultrasound sound wave reflections from the nano-particles.

Applicants respectfully submit that Hainfeld does not disclose applying an ultrasonic sound wave to the animal or human subject; and receiving ultrasound sound wave reflections produced by the ultrasonic wave in the animal or human subject, including ultrasound sound wave reflections from the nano-particles.

The cited text at col. 19, lines 10-15 of Hainfeld explicitly discusses **forms of electromagnetic radiation**. Furthermore, there appears to be no disclosure or suggestion in Hainfeld of acoustic properties of the discussed nano-particles, or using any such acoustic properties in imaging. Hainfeld is totally focused on the electromagnetic properties of its properties for X-ray imaging. One can only conclude

that by the plain language of col. 19, lines 10-15, Hainfeld is referring to subsonic electromagnetic waves. No reason based in prior art knowledge has been offered to modify Hainfeld to employ acoustic waves, as opposed to electromagnetic radiation.

Applicants also respectfully submit that Oraevsky does not disclose applying an ultrasonic sound wave to the animal or human subject. Instead, Oraevsky applies an electromagnetic signal (e.g., optical signal) to the subject.

Applicants respectfully submit that Bekeredjian does not disclose the particles of claim 15 having an acoustic impedance above 35.105 g/cm<sup>2</sup>s. While it is true that a chemical composition and its properties are inseparable, Bekeredjian does not disclose the same particles as in the present application and in particular in claim 15. For example, see page 5, lines 21-27 of the present specification where solid metal particles are disclosed that are not associated with non-metallic compounds such as proteins, polysaccharides and other structuring compounds. These characteristics permit the particles to have an acoustic impedance above 35.105 g/cm<sup>2</sup>s.

Bekeredjian does not disclose particles having these properties – instead it discloses gold-bound microtubules. So Bekeredjian's particles being of a different composition than particles disclosed in the present application, it is not surprising that

Bekeredjian's particles do not have the same properties – and in particular do not have the properties claimed in claim 15.

Accordingly, for at least this reasons, Applicants respectfully submit that claim 15 is patentable over the cited art.

#### Claim 16

Claim 16 is deemed to patentable over the cited art for similar reasons to those set forth above with respect to claim 15.

### **NEW CLAIMS 17-33**

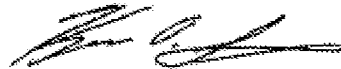
New claims 17-33 depend variously from claims 15 and 16 and are deemed patentable for at least the reasons set forth above with respect to claims 15 and 16.

**CONCLUSION**

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 6 and 15-33 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

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